

SECTION 08800

GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Glass.
- B. Glazing compounds and accessories.

1.02 REFERENCE STANDARDS

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; current edition.
- B. ASTM C 864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers; 2005.
- C. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants; 2005.
- D. ASTM C 1036 - Standard Specification for Flat Glass; 2006.
- E. ASTM C 1048 - Standard Specification for Heat-Treated Flat Glass--Kind HS, Kind FT Coated and Uncoated Glass; 2004.
- F. ASTM C 1193 - Standard Guide for Use of Joint Sealants; 2009.
- G. ASTM E 1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2007.
- H. ASTM E 2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2008.
- I. GANA (GM) - GANA Glazing Manual; Glass Association of North America; 2004.
- J. GANA (SM) - FGMA Sealant Manual; Glass Association of North America; 1990.

1.03 SUBMITTALS

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Product Data on Glass Types: Provide structural, physical and environmental characteristics, size limitations, special handling or installation requirements.
- C. Product Data on Glazing Compounds: Provide chemical, functional, and environmental characteristics, limitations, special application requirements. Identify available colors.

1.04 QUALITY ASSURANCE

- A. Perform Work in accordance with GANA Glazing Manual and FGMA Sealant Manual for glazing installation methods.
- B. Installer Qualifications: Company specializing in performing the work of this section with minimum _____ years documented experience.

1.05 FIELD CONDITIONS

- A. Do not install glazing when ambient temperature is less than 50 degrees F.
- B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.06 WARRANTY

- A. See Section 01780 - Closeout Submittals, for additional warranty requirements.

PART 2 PRODUCTS

2.01 GLAZING TYPES

- A. Type I-3 - Sealed Insulating Glass Units: Vision glazing.
 - 1. Application(s): Interior sound resistant window.
 - 2. Outboard Lite: Annealed float glass, 1/4 inch thick, minimum.
 - a. Tint: Clear.
 - 3. Inboard Lite: Annealed float glass, 1/4 inch thick, minimum.
 - a. Tint: Clear.
 - 4. Total Thickness: 1 inch.
 - 5. Glazing Method: Gasket glazing.
- B. Type I-1 - Sealed Insulating Glass Units: Vision glazing, low-E.
 - 1. Application(s): All exterior glazing unless otherwise indicated.
 - 2. Basis of Design: PPG Industries, Inc: www.ppgideascales.com.
 - 3. Outboard Lite: Annealed float glass, 1/4 inch thick, minimum.
 - a. Coating: PPG Solarban 80 on #2 surface, no coating on #3 surface.
 - b. Tint: None (clear).
 - 4. Inboard Lite: Annealed float glass, 1/4 inch thick.
 - a. Tint: None (clear).
 - 5. Total Thickness: 1 inch.
- C. Type I-2 - Sealed Insulating Glass Units: Safety glazing:
 - 1. Applications: Provide this type of glazing in the following locations:
 - a. Glazed lites in exterior doors.
 - b. Glazed sidelights and panels next to doors.
 - c. Other locations required by applicable federal, state, and local codes and regulations.
 - d. Other locations indicated on the drawings.
 - 2. Type: Same as other vision glazing except use fully tempered float glass for both outboard and inboard lites.
 - 3. Tint: Clear.
- D. Type G-1 - Single Vision Glazing:
 - 1. Applications: All interior glazing unless otherwise indicated.
 - 2. Type: Annealed float glass.
 - 3. Tint: Clear.
 - 4. Thickness: 1/4 inch.
 - 5. Glazing Method: Gasket glazing.
- E. Fire-Rated Safety Glazing:
 - 1. Applications: Provide this type of glazing in the following locations:
 - a. Glazed lites in fire doors.
 - 2. Fire Rating: As indicated on the drawings.
 - 3. Thickness: 1/4 inch.
 - 4. Glazing Method: As required for fire rating.
- F. Type G-2 - Single Safety Glazing: Non-fire-rated.
 - 1. Applications: Provide this type of glazing in the following locations:
 - a. Glazed lites in doors, except fire doors.
 - b. Glazed sidelights to doors, except in fire-rated walls and partitions.
 - c. Other locations required by applicable federal, state, and local codes and regulations.
 - d. Other locations indicated on the drawings.
 - 2. Type: Fully tempered float glass as specified.
 - 3. Tint: Clear.
 - 4. Thickness: 1/4 inch.
 - 5. Glazing Method: Gasket glazing.

2.02 EXTERIOR GLAZING ASSEMBLIES

- A. Structural Design Criteria: Select type and thickness to withstand dead loads and wind loads acting normal to plane of glass at design pressures calculated in accordance with 2006 code.
 - 1. Use the procedure specified in ASTM E 1300 to determine glass type and thickness.
 - 2. Limit glass deflection to 1/200 or flexure limit of glass, whichever is less, with full recovery of glazing materials.
 - 3. Thicknesses listed are minimum.

2.03 GLASS MATERIALS

- A. Float Glass Manufacturers:
 - 1. AGC Flat Glass North America, Inc: www.afgglass.com.
 - 2. Guardian Industries Corp: www.sunguardglass.com.
 - 3. PPG Industries, Inc: www.ppg.com.
 - 4. Substitutions: Refer to Section 01600 - Product Requirements.
- B. Float Glass: All glazing is to be float glass unless otherwise indicated.
 - 1. Annealed Type: ASTM C 1036, Type I, transparent flat, Class 1 clear, Quality Q3 (glazing select).
 - 2. Heat-Strengthened and Fully Tempered Types: ASTM C 1048.
 - 3. Tinted Types: Color and performance characteristics as indicated.
 - 4. Thicknesses: As indicated; for exterior glazing comply with specified requirements for wind load design regardless of specified thickness.
- C. Laminated Wired Glass: UL- or WH-listed as fire-protection-rated glazing and complying with 16 CFR 1201 test requirements for Category II without the use of a surface-applied film.

2.04 SEALED INSULATING GLASS UNITS

- A. Manufacturers:
 - 1. Any of the manufacturers specified for float glass.
- B. Sealed Insulating Glass Units: Types as indicated.
 - 1. Locations: Exterior, except as otherwise indicated.
 - 2. Durability: Certified by an independent testing agency to comply with ASTM E 2190.
 - 3. Edge Spacers: Aluminum, bent and soldered corners.
 - 4. Edge Seal: Glass to elastomer with supplementary silicone sealant.
 - 5. Purge interpane space with dry hermetic air.

2.05 GLAZING COMPOUNDS

- A. Manufacturers:
 - 1. Bostik Inc: www.bostik-us.com.
 - 2. Momentive Performance Materials, Inc (formerly GE Silicones): www.momentive.com.
 - 3. Pecora Corporation: www.pecora.com.
 - 4. BASF Construction Chemicals-Building Systems: www.chemrex.com.
 - 5. Substitutions: Refer to Section 01600 - Product Requirements.
- B. Butyl Sealant: Single component; ASTM C 920, Grade NS, Class 12-1/2, Uses M and A; Shore A hardness of 10 to 20; black color; non-skinning.

2.06 GLAZING ACCESSORIES

- A. Setting Blocks: Neoprene, 80 to 90 Shore A durometer hardness, ASTM C 864 Option I. Length of 0.1 inch for each square foot of glazing or minimum 4 inch x width of glazing rabbet space minus 1/16 inch x height to suit glazing method and pane weight and area.
- B. Glazing Gaskets: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C 864 Option I; black color.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that openings for glazing are correctly sized and within tolerance.
- B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and ready to receive glazing.

3.02 PREPARATION

- A. Prime surfaces scheduled to receive sealant.
- B. Install sealants in accordance with ASTM C 1193 and FGMA Sealant Manual.
- C. Install sealant in accordance with manufacturer's instructions.

3.03 INSTALLATION - EXTERIOR/INTERIOR DRY METHOD (GASKET GLAZING)

- A. Place setting blocks at 1/4 points with edge block no more than 6 inches from corners.
- B. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full contact.
- C. Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.

3.04 CLEANING

- A. Remove glazing materials from finish surfaces.
- B. Remove labels after Work is complete.
- C. Clean glass and adjacent surfaces.

3.05 PROTECTION

- A. After installation, mark pane with an 'X' by using removable plastic tape or paste; do not mark heat absorbing or reflective glass units.

END OF SECTION